

**BY ORDER OF THE COMMANDER  
ARNOLD ENGINEERING  
DEVELOPMENT COMPLEX**



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**Special Management**

**CAPABILITIES-BASED PLANNING**

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This instruction implements Capabilities-based planning, to include execution tracking, uses the Capability Analysis and Risk Assessment (CARA) process. The CARA process identifies the capabilities the Complex must deliver, the requirements and the costs needed to deliver the capabilities, the risks associated with delivering the capabilities, and the information needed to make decisions that optimize the capabilities and minimize risk. CARA integrates the planning for all direct budget authority (DBA) and reimbursable budget authority (RBA) and all AEDC organizations into a single, capabilities-based process. This instruction is applicable to all Arnold Engineering Development Complex (AEDC) personnel who plan, manage, and/or execute tasks, projects, or programs that use DBA or RBA. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 36-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>

### **SUMMARY OF CHANGES**

This instruction provides operating procedures for AEDC's capabilities-based planning process. This document has been substantially revised and should be completely reviewed. This revision makes significant process changes; replaces the Capabilities Review Board with the AEDC Council; makes administrative updates; incorporates the Graduated Facility Readiness Matrix; and updates the Planning Schedule.

#### **1. Responsibility and Authority**

1.1. The Commander, supported by the AEDC Council, provides corporate guidance for capabilities-based planning; reviews and updates the Graduated Facility Readiness Matrix (GFRM); reviews and constrains the capability roadmaps; approves funding allocation bogeys in accordance with strategic direction; reviews and modifies the CARA Integrated Requirements List (IRL); and determines final resource allocation decisions.

1.2. Capability Owners (COs) are responsible to the AEDC Commander for ensuring their capabilities meet current and future customer requirements; assessing the capability state defined in the Graduated Facility Readiness Matrix (GFRM); developing capability roadmaps that support the GFRM; meeting funding bogies and defending their DBA/RBA requirements during the Integrated Requirements List (IRL) review; identifying the risks associated with delivering the capabilities; and recommending funding adjustments to minimize those risks.

1.2.1. Capability stakeholders and functional organizations support the Capability Owners with requirements identification, cost estimates, capability analyses, risk assessments, and other CARA product development. This includes but is not limited to the development of maintenance, IT, technology, and investment requirements.

1.2.2. Financial Managers support the Capability Owners with the financial elements of IRL requirements identification within their responsible work breakdown structures (WBS).

1.3. Plans & Programs Division (AEDC/XP) facilitates the overall capabilities-based planning process; identifies CARA data requirements; communicates/documents allocations for budget and offset bogies; directs CARA team activities; collects, analyzes, and interprets CARA data; develops IRL iterations; and delivers CARA products for AEDC Council and higher headquarters review and final use. AEDC/XP also facilitates the development and Council review of the capability roadmaps.

1.4. Financial Management & Comptroller Division (AEDC/FM) identifies the available budget authority, estimates fallout and commercial earnings, and ensures compliance with all financial rules and regulations in the IRL development.

1.5. Contracting Division (AEDC/PK) issues requests for proposal (RFPs), oversees the proposal preparation and fact-finding processes, and ensures that the operating contractor is tasked in the operating contract to support the CARA process and products as defined in this instruction.

## 2. Planning Guidance

2.1. **Graduated Facility Readiness Matrix.** The Council uses the GFRM to identify the desired current and future status of all facilities at AEDC. The Council reviews the GFRM twice annually and the results are used to develop capability priorities, capability roadmaps, and IRL inputs.

2.2. **Capability Roadmaps.** The Capability Owners develop capability roadmaps that define the path to achieve each capability's status as defined in the GFRM. The roadmaps compare AEDC's current capabilities with the required capabilities and identify the sustainment level, the capability gaps, and the requirements needed to close the gaps. Required capabilities are determined by examination of applicable strategic plans, current

and forecasted national needs, higher headquarters and Council direction, customer requirements, competitor status, and other factors that influence AEDC capabilities.

2.2.1. The Strategic Planning Branch (AEDC/XPT) develops a template and timeline for Capability Roadmap development and facilitates an approval process with the Council. Once the roadmaps are constrained and approved by the Council, they are used as guidance to develop the workload IRL and to plan the Program Objective Memorandum (POM) inputs to higher headquarters.

2.2.2. The Capabilities Integration Branch (AEDC/XPR) assists the Capability Owners in the development, vetting, and incorporation of the capability roadmaps.

### 3. Request for Proposal Development

3.1. **Overview.** The AEDC operating contract calls for an annual revalidation of the work to be accomplished during the upcoming fiscal year. The CARA process is used to identify the capabilities that AEDC plans to deliver for the fiscal year and to allocate available resources in an attempt to deliver those capabilities with acceptable risk.

3.2. **Integrated Requirements List (IRL).** Capability Owners input all DBA and RBA resource requirements for the budget year through the FYDP into the Integrated Requirements List. The IRL is the basis for the annual workload RFP, the POM submission to headquarters, unfunded requirements, and other budget drills. The contractor develops projects to deliver the requirements in the IRL and each project must support only one capability, e.g., cannot have a single maintenance project that covers multiple capabilities, unless approved by the Council. IRL data also include the work breakdown structure (WBS), project number, project title, scope, impact, program element codes, fund codes, and cost and man-hour estimates. The Council uses the IRL to adjust and optimize the allocation of resources.

3.2.1. AEDC/XPT maintains the IRL spreadsheet database and controls its configuration. AEDC/XPT keeps the IRL on a SharePoint server with universal read-only access so any member of AEDC can review it at any time. The Capability Owners or their designated representatives are the only persons who may submit inputs or changes to the IRL through AEDC/XPT. Any stakeholders with inputs or changes must submit them through the appropriate Capability Owner. If resource requirements are not identified in the IRL, they will not be considered for funding during the CARA process.

3.3. **Building Unconstrained IRL.** Capability Owners assemble stakeholder teams who assist in identifying the unconstrained set of capability requirements in the IRL. (The IRL becomes constrained once Capability Owners apply available budget against the requirements.) The test capability stakeholder teams include, but are not limited to, representatives from Operations, Maintenance, Investments, Civil Engineering, Information Technology (IT), and Technology. The non-test capability stakeholder teams should be similarly and appropriately manned. In addition to DBA, Capability Owners will also identify forecasted RBA workload by test cell or non-test capability in the IRL.

3.4. **Resource Allocation and Offset Bogies.** AEDC/XP receives anticipated funding from AEDC/FM and prepares allocation and offset bogies by PEC for distribution to the Capability Owners. The Council reviews and the Commander approves the bogies prior to distribution. Methods of distributing the allocation bogies among the capabilities will vary

from year to year but regardless of the distribution, the bogies are considered to be a starting point subject to Council-directed adjustments. The levels of offset bogies vary depending on the PEC and current year circumstances, but normally are 5 – 10% of the total funding.

**3.5. Constraining the IRL.** The Capability Owners analyze their customers' needs for the planning period and apply funding to the requirements (IRL line-items). The Capability Owners' goal should be to meet customer needs and minimize the risk given the available resources. The four possible funding designations for each requirement in the IRL are funded (FF), funded offset (FO), unfunded disconnect (UD), or unfunded (UF). The total of FF and FO requirements must not exceed the allocation bogies and comprise the funded program. The total of the FO requirements must meet the offset bogey and must be viable offsets. The UD requirements are being recommended for funding by the Council but should be lower priority than the least-dear funded requirement (FO or FF) in the same PEC. UF requirements are important to deliver a low risk capability but may not be viable in tightly constrained budgets. Once funding designations are made, Capability Owners submit a copy of their IRL to AEDC/XPT for Complex-wide compilation.

**3.6. Council IRL Review.** AEDC/XPT facilitates a capability line-by-line review of the IRL with the Council and Capability Owners. The purpose of the review is for the Council to adjust which requirements are funded, partially funded, or unfunded to meet Complex goals and optimize the funding distribution across capabilities. During the review, Capability Owners explain their requirements, identify key disconnects and offsets, and provide responses to Council issues. Once the IRL review is complete, AEDC/XPT compiles an offset-disconnect file, i.e., a list of all FO and UD requirements, and the Council bands these requirements using the following A – F priorities:

Offsets (FO)

A Hard Take

B Medium Take

C Least Dear

FUNDING LINE

Disconnects (UD)

D Should Fund

E Important

F Lower Priority

The C's and D's then comprise the primary tradespace and will be considered for adjustment. Some Capability Owners will take the prioritization a step further and prioritize their C's and D's from 1 to n. AEDC/XPT will maintain an updated version of the offset disconnect file to serve as an unfunded requirements list. The Council will identify the top 10 disconnects in each of the three major PECs.

**3.7. IRL Adjustment.** AEDC/XPT maintains a balance sheet to compare the funded program in the IRL with available funding to ensure the program remains affordable. Available funding includes the headquarters allocation plus fall-out. Fall-out is any current year funds that do not carry over scope and can be used in the following year's program. (AEDC/FM provides an estimate by PEC of forecasted fall-out.) The Council reviews all

C's and D's and makes fund/unfund adjustment decisions based on Complex needs which in turn adjusts the funding balance up or down. The balance sheet is updated to ensure the program remains affordable with the proper level of management reserve. The Council and Capability Owners take a brief period of review of the IRL in its entirety to uncover any final issues.

**3.8. Issue Request for Proposal.** Once adjustments to the IRL are complete, the funded lines (FF and FO) in the IRL serve as the basis for the request for proposal (RFP) for the annual workload revision. AEDC/PK completes the RFP package which includes a letter of instruction, the IRL, and issues, concerns, and emphasis areas identified by the Council. After AEDC/PK issues the RFP, the operating contractor proposes to the funded scope in the IRL or as directed in the letter of instruction.

#### **4. Proposal Preparation and Fact-Finding**

**4.1. Proposal Preparation.** During the development of the proposal, the operating contractor communicates with the Council and the Capability Owners to fully understand the intended scope of the IRL and the rationale for estimates. The operating contractor bases its proposal on the intended scope and avoids requirements growth. If cost estimates in the IRL are erroneous, the operating contractor proposes to the intended scope, not the IRL cost estimates. If the proposal exceeds the available budget authority, the program is rebalanced during fact-finding.

**4.2. Revision (Rev) 0 Proposal Development.** The operating contractor ensures that requirements in the IRL are supported by a project and staffing structure that delivers the intended scope. The project structure should be designed such that each project supports only one capability. The operating contractor develops a "CARA vs. Rev 0" spreadsheet that maps the projects in the proposal back to the requirements in the IRL. This provides each Capability Owner visibility of how their capability requirements are going to be met within the project structure. If the operating contractor identifies key disconnects during RFP preparation, these disconnects and their proposed cost are identified in the "parking lot," which is the operating contractor's list of unfunded requirements.

**4.3. Fact-Finding.** Fact-Finding is a chance to address proposal errors, parking-lot requirements, new Council direction, and carry-over requirements (uncompleted scope that comes with its own funding). Capability Owners ensure the proposal matches the intended scope of the IRL and where it does not match, identify appropriate adjustments to the proposal and IRL. Capability Owners and financial advisors identify any carry-over scope that needs to be added to the proposal and IRL. Capability Owners review the parking lot and identify disconnects (UD) that should be considered for funding. Financial advisors analyze their WBS elements and functional representatives review their areas of interest and alert the Capability Owners of issues. The fact-finding teams also identify administrative errors or other minor adjustments to the proposal and IRL. Capability Owners review all found issues and disconnects (with potential offsets to fund disconnects) with their division chiefs. Each division chief identifies the key disconnects and offsets for consideration and they are discussed at Council.

**4.4. Request for Revised Final Proposal Revision.** XPT documents all Council decisions and Capability Owners modify the adjust file to implement the decisions. AEDC/FM and financial advisors monitor data accuracy in the adjust file and ensure the program remains

fiscally balanced as the adjustments are approved. The final adjust file maps how the Rev 0 proposal is modified into Rev 1. AEDC/PK captures any other issues, and with the final adjust file, provides the operating contractor with a “Request for Revised Final Proposal Revision.”

**4.5. Develop Rev 1 Proposal.** The operating contractor develops the Rev 1 proposal following the same guidance used for the Rev 0 proposal to include a CARA vs. Rev 1 spreadsheet that maps the projects in the proposal to the IRL. The operating contractor delivers the Rev 1 proposal, and the Capability Owners perform an abbreviated fact-finding of Rev 1. Capability Owners provide fact-finding results to their division chiefs with appropriate issues highlighted. The Council reviews selected issues and AEDC/CC either grants or denies authority to go on-contract with Rev 1. AEDC/XPT will update the IRL so it reflects Rev1 and then all future revisions during execution.

## **5. Execution Tracking**

**5.1. Overview.** The Council reviews cost, schedule, and performance data from the current contract revision during recurring program management reviews (PMRs). If significant adjustments to the program are needed, the Council approves those adjustments through the contract revision process. The contract revision becomes the new program baseline and AEDC/XP updates the IRL to reflect the new baseline. Execution tracking continues through the end of the fiscal year.

**5.2. Program Management Reviews.** Execution tracking is accomplished using recurring PMRs. The PMR is a two-pronged review provided to the Council by the Capability Owners and project managers. Capability Owners provide a report card assessment of the execution support they are receiving from support functions (executing agents). In addition, the project managers provide the Council with a cost, schedule, and performance assessment of key project execution. The Council provides guidance and determines if any redirection or contract revisions are warranted.

**5.3. Contract Revisions.** The Council reviews for approval any proposed project revisions above a \$500K threshold. The division chiefs approve project revisions below the threshold. These proposed revisions are identified during PMRs or during Council meetings. AEDC/FM maintains the adjustment file and financial advisors enter adjustments directed by the Council (or below-threshold or administrative adjustments). Once complete, AEDC/FM provides the adjustment file to AEDC/PK for the revision RFP. The contractor uses the adjustment file to update the contract and provides a new CARA vs. Rev “X” file to AEDC/XP. AEDC/XP updates the IRL to reflect the revision changes.

**5.4. Baseline IRL.** With each contract revision, XP will update the IRL to reflect the current contract revision. When planning for the next year’s program begins, the latest revision of the IRL will serve as the baseline IRL for building the new program. At the end of the fiscal year, the executing program will be reviewed against actual execution data and adjustments to next year’s program will be made.

## **6. POM Planning**

**6.1.** POM planning is directed by HQ AFMC and led at AEDC by XP. The POM requirements over the FYDP are based on the capability roadmaps and GFRM. Draft FYDP requirements are loaded in the IRL at the same time as the budget year requirements and

finalized during the POM build. Level-of-effort requirements continue from the budget year through the FYDP (with modification if necessary), and discrete requirements, such as investments, are loaded in the appropriate years within the FYDP. All cost estimates are in base-year dollars without further inflation.

6.2. AEDC/XP facilitates development of a baseline program based upon HQ AFMC guidance and bogies. The Capability Owners identify their program funding, disconnects and offsets, as well as initiatives based on approved strategic thrusts. The program is iterated with the Council to optimize the capabilities, minimize the risks, and align it with HQ AFMC guidance. Once the program is approved by the Council, XPT and financial advisors load the requirements into the Command Management System and/or provide the IRL to HQ AFMC.

**Table 1. Planning Schedule**

Jan	Begin Budget Year IRL
Mar	Complete Budget Year IRL Iteration 1
Apr	Graduated Facility Readiness Matrix Updated
Apr-May	Council IRL Review
May	Budget Year IRL Iteration 2 Completed
1 Jun	Issue RFP for Rev 0
Jun-Jul	Prepare Capability Roadmaps
Jul-Aug	Fact-Finding Rev 0
Aug	Council Capability Roadmaps Review
Aug	Begin POM IRL
Sep	Issue RFP for Rev 1
1 Oct	On-Contract Rev 1
Oct-Nov	CMS Updated
Nov	Graduated Facility Readiness Matrix Updated
Nov-Dec	Council POM IRL Review
Dec	Submit POM
As required	Contract Revisions

**7. Metrics.** The metric for this procedure is the generation and timeliness of the RFP beginning in June of each year and the application of Rev 1 to the contract by 1 Oct of each year.

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